

a continuous uninterrupted piezoelectric film forming a single piezoelectric element placed on a surface of a relatively incompressible substrate, wherein the piezoelectric film adjacent the relatively incompressible substrate generates an electrical signal substantially sensitive to compression of the piezoelectric film only;

a plurality of areas of relatively compressible substrate formed in the surface of the relatively incompressible substrate adjacent areas within the continuous uninterrupted piezoelectric film, wherein the plurality of areas within the continuous uninterrupted piezoelectric film adjacent the areas of relatively compressible substrate form an array of enhanced sensitivity areas wherein an electrical output of the entire array may be observed with a single pair of connectors; and

a single pair of connectors providing access to the electrical output from the array.

2. [Thrice Amended] The piezoelectric sensor of claim 1 further comprising:

a beam pattern for the array determined by the relationship between each of the shape of each of the areas of relatively incompressible substrate and each of the areas of relatively compressible substrate adjacent the single piece of piezoelectric film comprising the array.

3. [Twice Amended] The piezoelectric sensor of claim 1, further comprising:

a two-dimensional array of areas of relatively compressible substrate formed in the surface of the relatively incompressible substrate forming a two-dimensional continuous line array of areas of increased sensitivity in the piezoelectric film to

5 impinging acoustic pressure waves film having a shapeable beam pattern and
6 selectable response:

- 1 4. [Amended] The piezoelectric sensor of claim 3, further comprising:
2 the two-dimensional continuous line array of areas of increased sensitivity are formed
3 into a three-dimensional shape to form a three-dimensional continuous line array of
4 areas of increased sensitivity to impinging acoustic pressure waves in the
5 piezoelectric film having a shapeable beam pattern and selectable response:

- 1 5. [Amended] The piezoelectric sensor of claim 1 further comprising:
2 a shapeable beam pattern for the array shaped by variation in location of the areas of
3 increased sensitivity within the array.

- 1 6. [Amended] The piezoelectric sensor of claim 1 further comprising:
2 variation in the compressibility of the substrate adjacent the areas of increased
3 sensitivity to determine the spectral response of the array.

- 1 7. [Amended] The piezoelectric sensor of claim 1 further comprising:
2 a variation in a ratio of the total surface area of the areas of increased sensitivity to
3 the total surface area of the relatively incompressible substrate to shape the beam
4 pattern of the array.

- 1 8. [Twice Amended] The piezoelectric sensor of claim 1 further comprising:

2 a variation in a ratio of the total surface area of the areas of increased sensitivity to
3 the total surface area of the relatively incompressible substrate to determine the
4 spectral response of the piezoelectric continuous line array.

1 9. [Twice Amended] The piezoelectric sensor of claim 1 further comprising:
2 a variation in the ratio of the total surface area of the areas of increased sensitivity to
3 the total surface area of the relatively incompressible substrate to determine the noise
4 reduction for the array.

1 10. [Previously Amended] The piezoelectric sensor of claim 3 further comprising:
2 a two dimensional shape of the array formed to determine the spectral response of
3 the array.

1 24. (new) A method for detecting acoustic seismic data on a single element piezoelectric
2 sensor comprising:
3 placing a continuous piece of uninterrupted piezoelectric film forming a single
4 piezoelectric element on a surface of a relatively incompressible substrate, wherein
5 the piezoelectric film adjacent the relatively incompressible substrate generates an
6 electrical signal substantially sensitive to compression of the piezoelectric film only;
7 forming a plurality of areas of relatively compressible substrate formed in the surface
8 of the relatively incompressible substrate adjacent areas within the continuous
9 uninterrupted piezoelectric film; wherein the plurality of areas within the continuous
10 uninterrupted piezoelectric film adjacent the areas of relatively compressible substrate

11 form an array of enhanced sensitivity areas wherein an electrical output of the entire
12 array may be observed with a single pair of connectors; and
13 connecting a single pair of connectors to provide to access the electrical output from
14 the array.

1 25. [new] The method of claim 24 further comprising:
2 forming a beam pattern for the array by adjusting the relationship between the shapes
3 and configuration of the areas relatively incompressible substrate and the areas of
4 relatively compressible substrate adjacent the single piece of piezoelectric film.

1 26. [new] The method of claim 24, further comprising:
2 forming a two-dimensional array of areas of relatively compressible substrate formed
3 in the surface of the relatively incompressible substrate to create a two-dimensional
4 continuous line array of areas of increased sensitivity in the piezoelectric film to
5 impinging acoustic pressure waves having a shapeable beam pattern.

1 27. [new] The method of claim 26, further comprising:
2 forming the two-dimensional continuous line array of areas of increased sensitivity
3 into a three-dimensional shape to form a three-dimensional continuous line array of
4 areas of increased sensitivity to impinging acoustic pressure waves in the
5 piezoelectric film having a shapeable beam pattern.

1 28. [amended] The method of claim 25 further comprising:

2 varying a location of an area of increased sensitivity to shape the beam pattern of the
3 array.

1 29. [amended] The method of claim 25 further comprising:
2 varying a size of an area of increased sensitivity to shape the spectral response of the
3 piezoelectric continuous line array.

1 30. [amended] The method of claim 25 further comprising:
2 varying a ratio of a total surface area of the areas of increased sensitivity to the total
3 surface area of the relatively incompressible substrate to shape the beam pattern of
4 the array.

1 31. [amended] The method of claim 25 further comprising:
2 varying a ratio of a total surface area of the areas of increased sensitivity to the total
3 surface area of the relatively incompressible substrate are varied to determine the
4 spectral response of the piezoelectric continuous line array.

1 32. [amended] The method of claim 25 further comprising:
2 varying at least one of the size, shape or configuration of the sensitive areas in the
3 array to determine a noise level.

1 33. [amended] The method of claim 26 further comprising:
2 shaping of the areas forming the array to determine the spectral response of the